

measuring cell.” Applicants are unsure of the specific nature Office’s concerns as the statement seems somewhat ambiguous or even, contradictory. However, in an effort to address those concerns, Applicants note that the waveguide comprises the tube (or cladding) and the fluid (core). Thus, light is transmitted and guided through the fluid because the fluid is the core of the waveguide.

More specifically, as currently claimed, light is guided through the fluid because there is internal reflection at the interface between the fluid and the tubing. In the case of the fluid being a liquid, the internal reflection is generated by the fact that the material composing the tube has a lower refractive index than the liquid (e.g. Teflon AF and water). In the case of the fluid being gaseous, the internal reflection is generated by features integrated inside of the walls of the tube (e.g. photonic bandgap crystal). See, e.g., the specification at page 9.

In contrast, in the prior art devices, light would not be able to travel through, i.e. be guided through, the fluid itself, because there would be no total internal reflection at the fluid-tube wall interface. Light would penetrate the tube walls and travel inside them or be lost instead of being guided inside of the liquid. Accordingly, the prior art devices do not anticipate or render obvious the claimed invention.

In view of the foregoing remarks, Applicants respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account No. 06-0916.

Respectfully submitted,

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